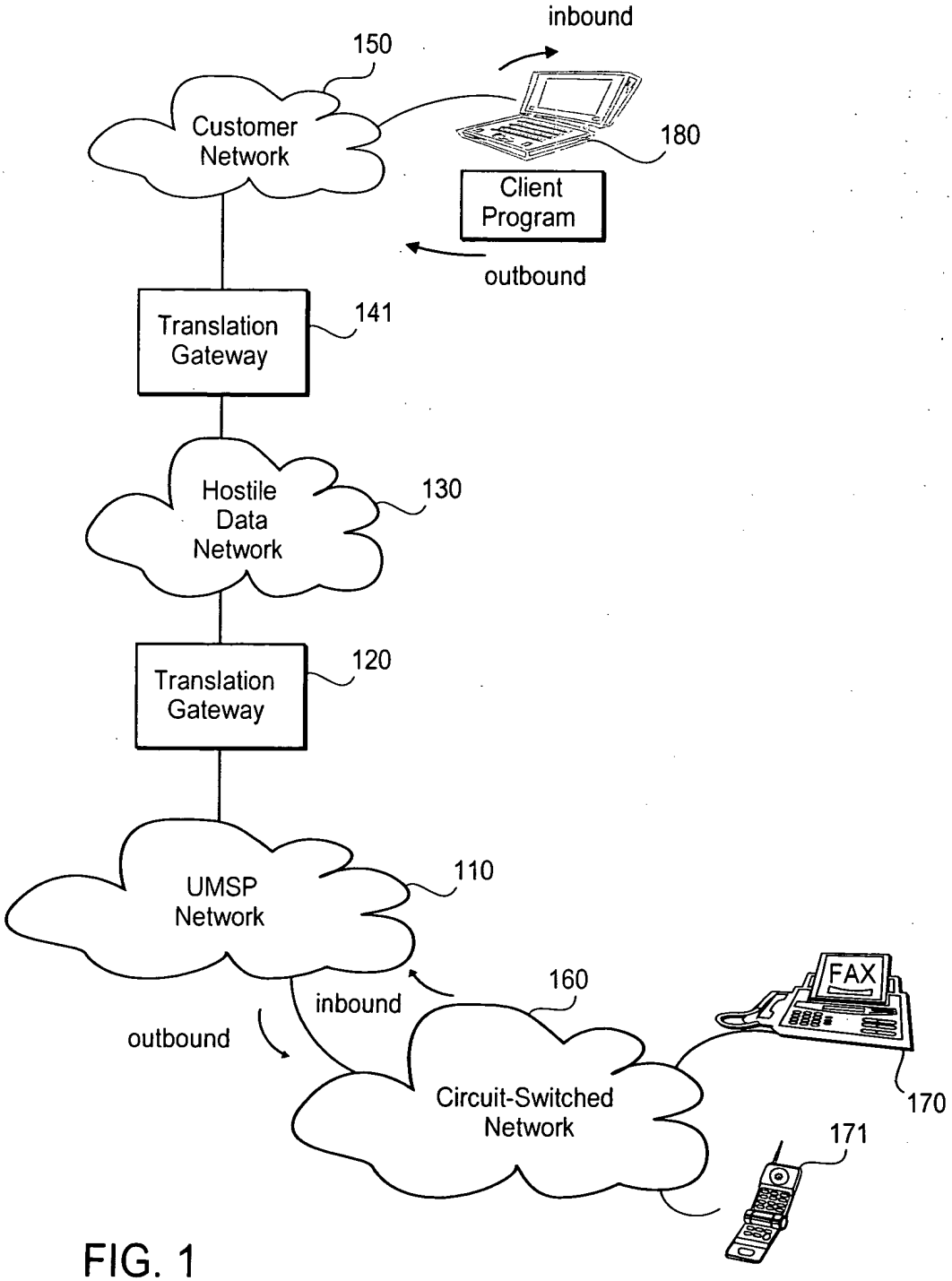
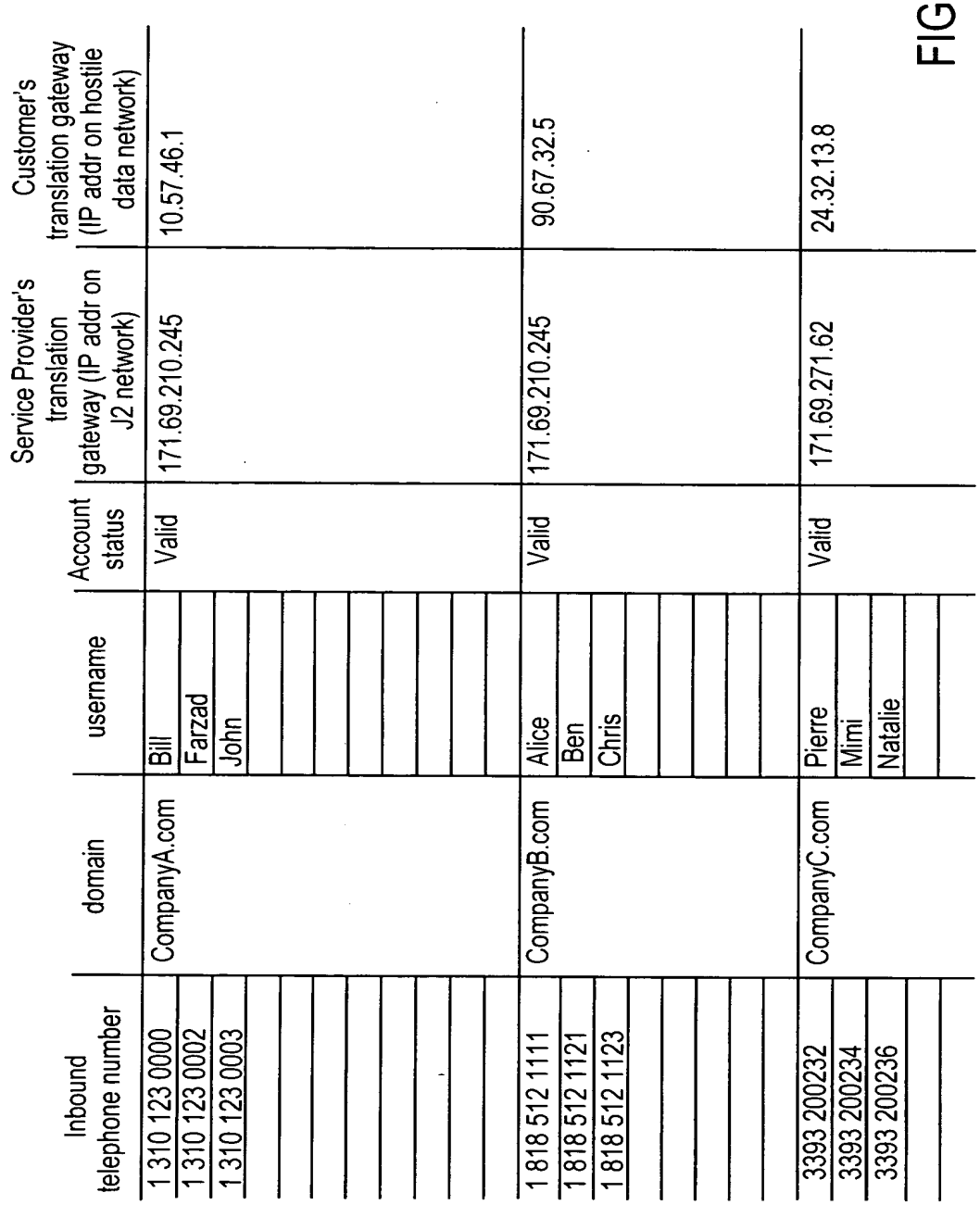

inbound
150
Customer Network
180
Client Program
outbound
Translation Gateway
141
Hostile Data Network
130
Translation Gateway
120
UMSP Network
110
160
inbound
outbound
FAX
Circuit-Switched Network
170
171

FIG. 1



Inbound telephone number	domain	username	Account status	Service Provider's translation gateway (IP addr on J2 network)	Customer's translation gateway (IP addr on hostile data network)
1 310 123 0000	CompanyA.com	Bill	Valid	171.69.210.245	10.57.46.1
1 310 123 0002		Farzad			
1 310 123 0003		John			
1 818 512 1111	CompanyB.com	Alice	Valid	171.69.210.245	90.67.32.5
1 818 512 1121		Ben			
1 818 512 1123		Chris			
3393 200232	CompanyC.com	Pierre	Valid	171.69.271.62	24.32.13.8
3393 200234		Mimi			
3393 200236		Natalie			

FIG. 2

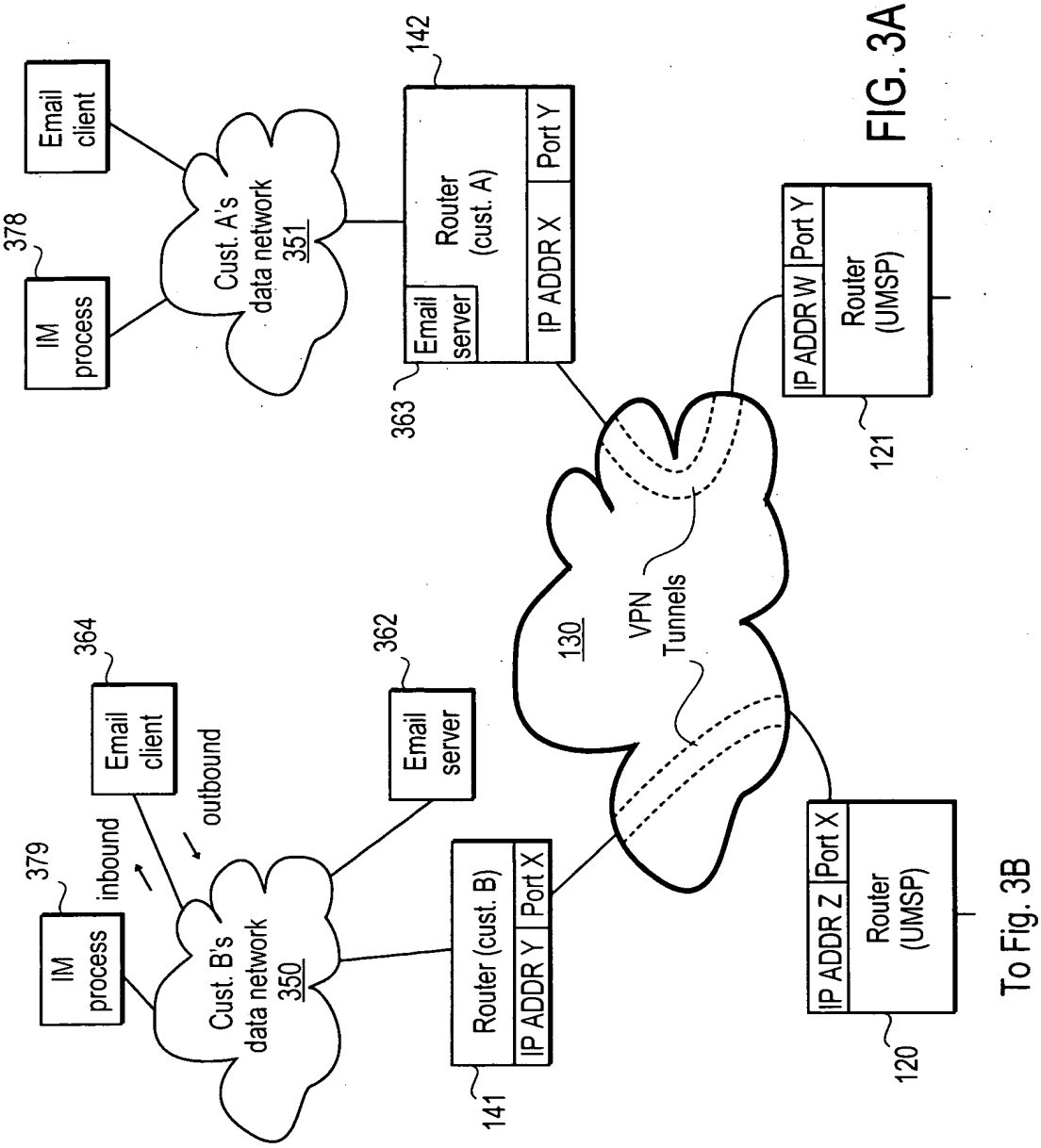
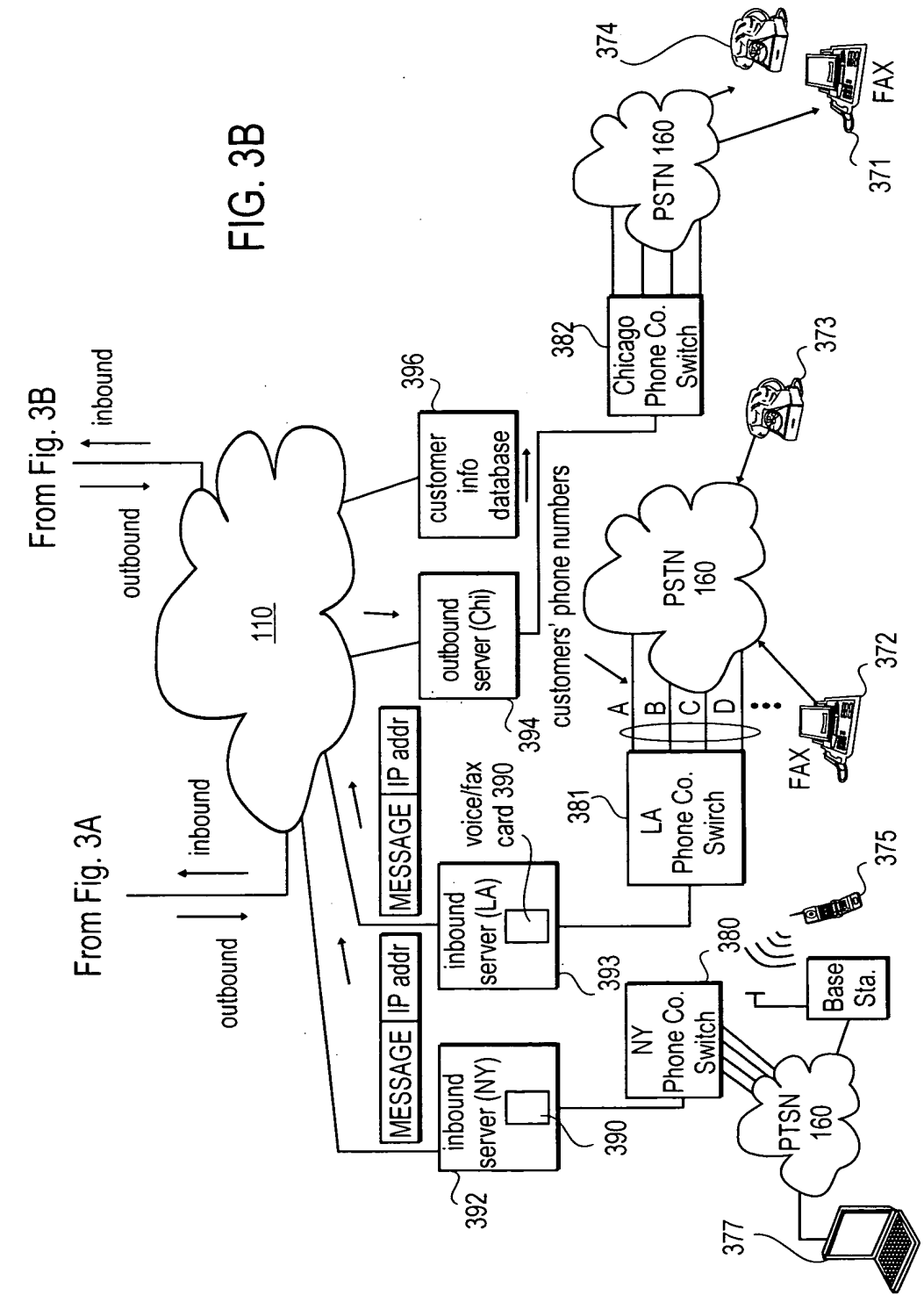

Email client
IM process
Cust. A's data network 351
Router (cust. A)
Email server
IP ADDR X
Port Y
142
363
378
IP ADDR W
Port Y
Router (UMSP)
121
130
VPN Tunnels
364
Email client
outbound
inbound
379
IM process
Cust. B's data network 350
Email server
362
Router (cust. B)
IP ADDR Y
Port X
141
IP ADDR Z
Port X
Router (UMSP)
120
To Fig. 3B

FIG. 3A

FIG. 3B


From Fig. 3B
From Fig. 3A
inbound
outbound
inbound
outbound
110
customer info database
396
outbound server (Chi)
394
customers' phone numbers
voice/fax card 390
MESSAGE
IP addr
MESSAGE
IP addr
inbound server (LA)
393
inbound server (NY)
390
392
Chicago Phone Co. Switch
382
PSTN 160
374
FAX
371
373
PSTN 160
A
B
C
D
372
FAX
LA Phone Co. Swirch
381
375
380
Base Sta.
NY Phone Co. Switch
PTSN 160
377

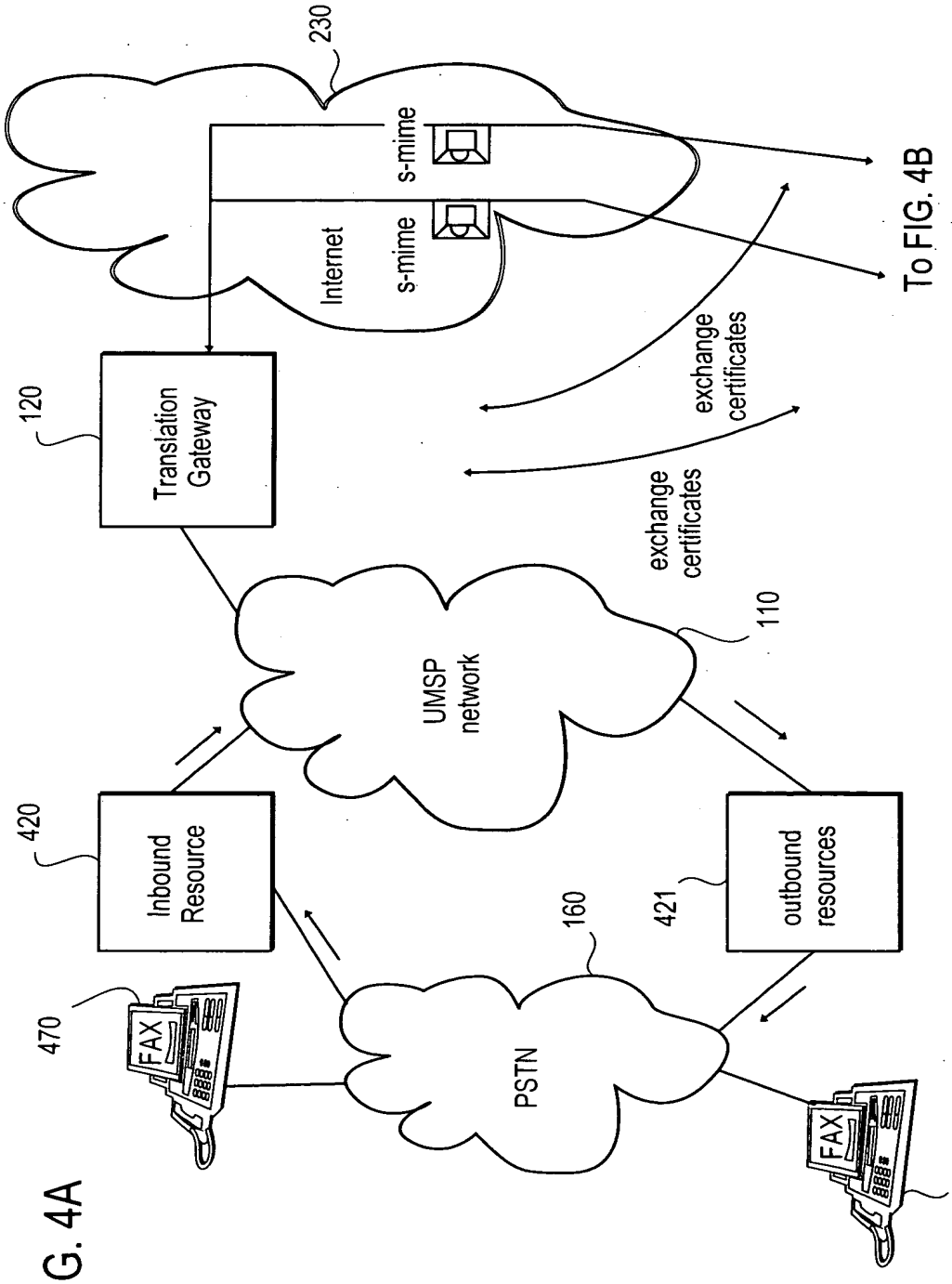

230
s-mime
s-mime
Internet
To FIG. 4B
exchange certificates
exchange certificates
120
Translation Gateway
110
UMSP network
420
Inbound Resource
421
outbound resources
160
PSTN
470
FAX
471
FAX

FIG. 4A

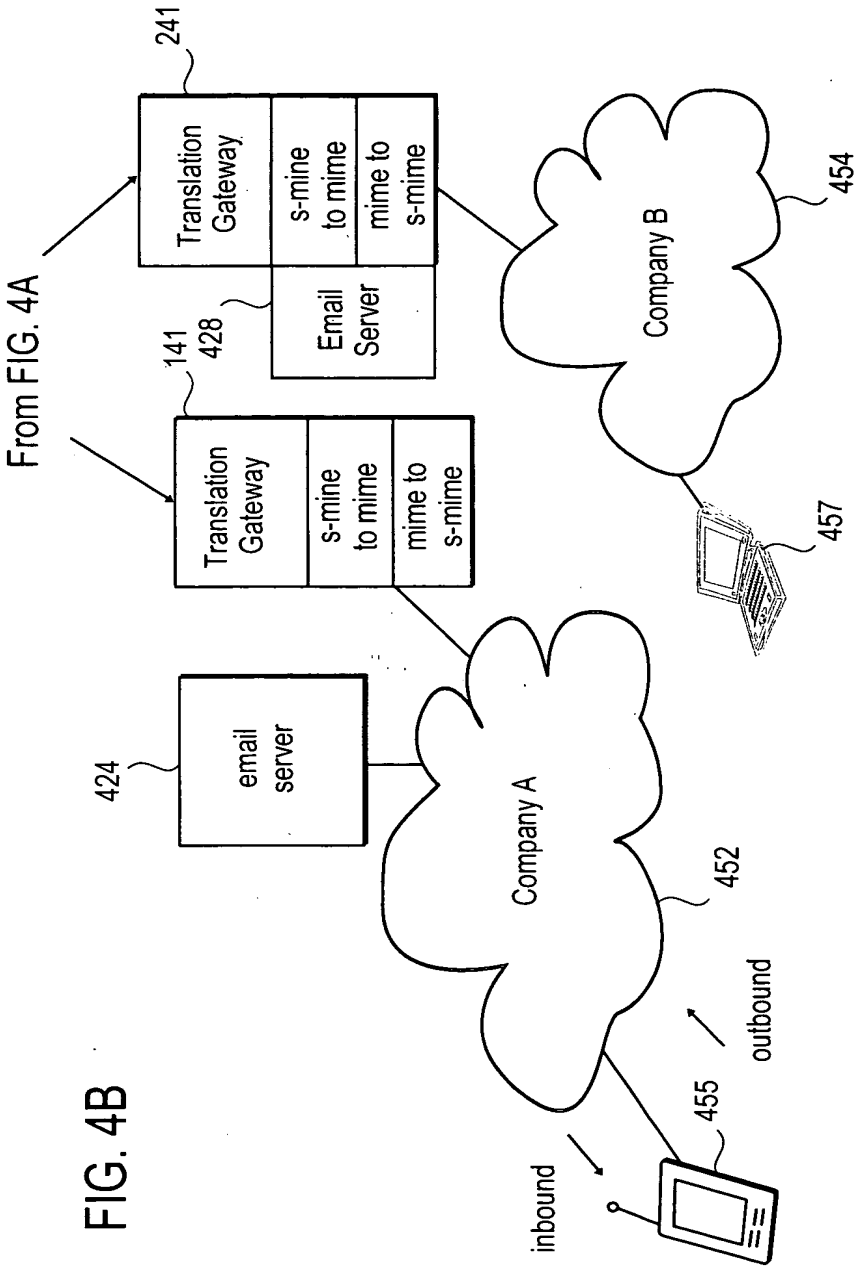

From FIG. 4A
241
Translation Gateway
s-mine to mime
mime to s-mime
Email Server
428
141
Translation Gateway
s-mine to mime
mime to s-mime
424
email server
Company A
452
Company B
454
457
455
inbound
outbound

FIG. 4B

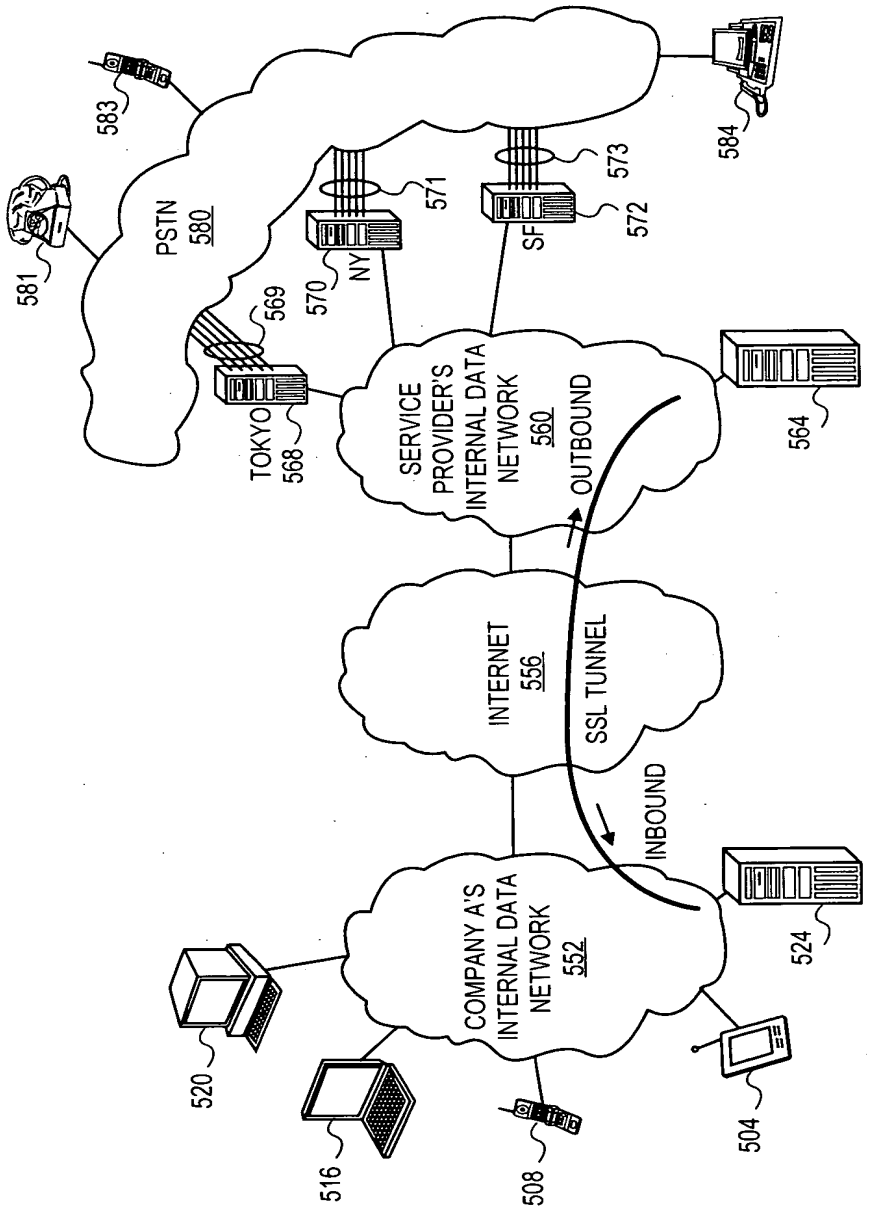
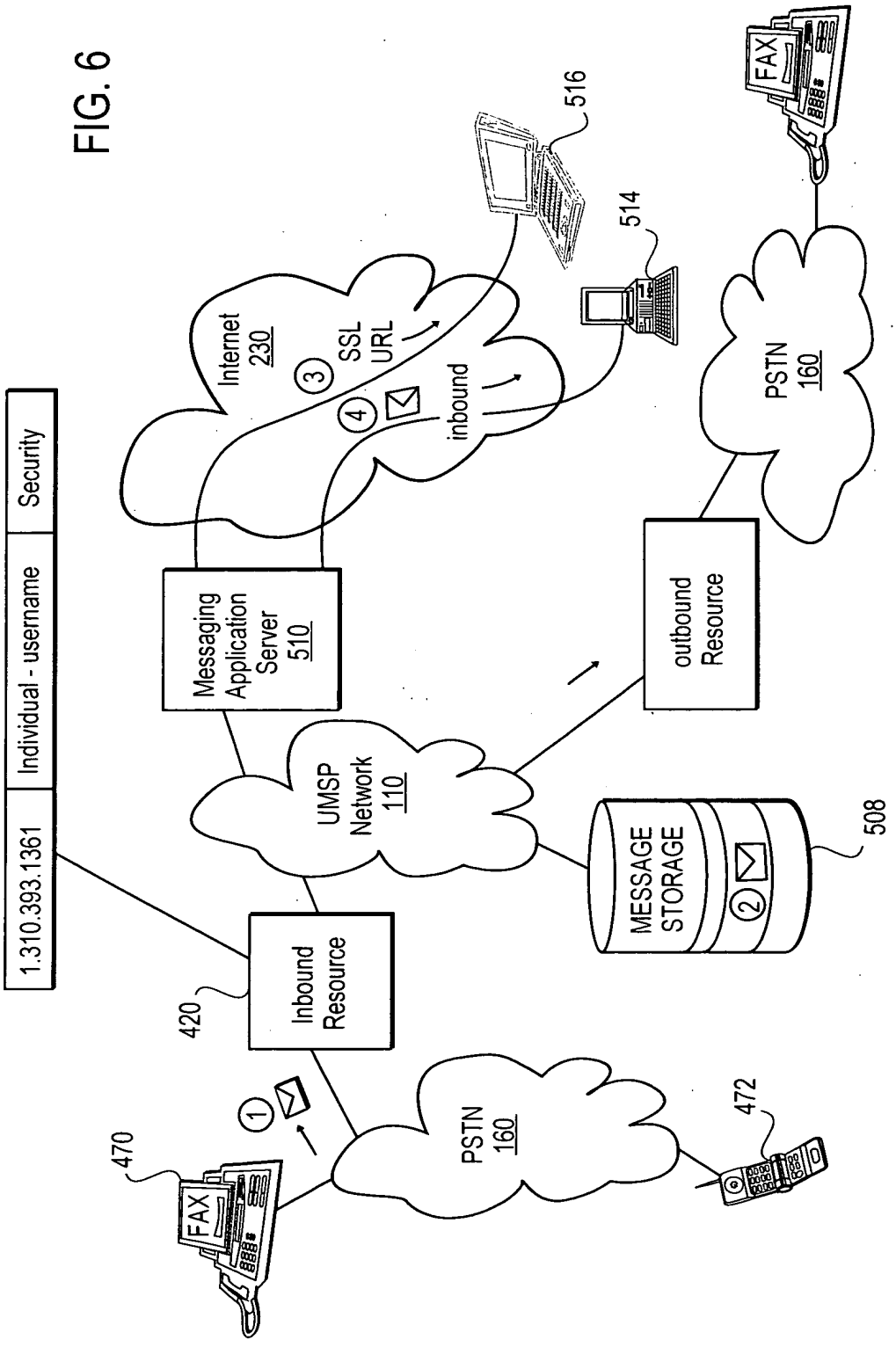

583
584
PSTN
580
581
571
573
NY
570
SF
572
569
TOKYO
568
SERVICE PROVIDER'S INTERNAL DATA NETWORK
560
OUTBOUND
564
INTERNET
556
SSL TUNNEL
INBOUND
COMPANY A'S INTERNAL DATA NETWORK
552
524
520
516
508
504

FIG. 5

FIG. 6


1.310.393.1361
Individual - username
Security
Inbound Resource
420
UMSP Network 110
Messaging Application Server 510
Internet 230
SSL URL
inbound
outbound Resource
MESSAGE STORAGE
508
PSTN 160
PSTN 160
FAX
470
FAX
472
514
516
1
2
3
4